quite normal. As concerns the brain, Broca has remarked that the asymmetry of the convolutions is the special advantage of man and the more highly developed animals, while the convolutions in the primates, negro, and idiots, tend to become more and more symmetrical. Such ideas as these are of course quite out of harmony with those of the Italian school. For the purpose of seeing whether the skulls of the lower animals corresponded with their more symmetrical brain development, the author studied the relations of the frontal suture on many existing and some extinct species, and found all plainly asymmetrical, and some so to a very considerable degree. It appears from this study that brain and skull are not so interdependent, and further, that there may be some reason for considering asymmetry as the rule in the development of animal structures, and that when the Italian school point to the asymmetry of the skull as a characteristic of the criminal class, the abnormality really lies in the excessive development of the difference between the two sides rather than in a departure from perfectly symmetrical growth.

Kraniometrie und Kephalometrie. Vorlesungen gehalten an der Wiener Allgemeinen Poliklinik von M. BENEDIKT. Mit 36 Holzschnitten, viii und 172 S. Wien und Leipzig, Urban und Schwarzenberg, 1888. Reviewed in Neurolog. Centralblatt, No. 10, 1888, by Sommer.

The author has first to call attention to the relations between the atypical development of the skull and abnormal brain functioning, while the final goal of craniology is from the study of the form of the skull to infer all the laws of its growth. In his own studies he has used an elaborate instrument called an optical kathetometer. From his investigations, he is led to the view that the exterior of all skulls presents a definite number of spherical surfaces, often with very various radii; that these stand in relation to definite portions of the brain, and that between these two there is a fixed relation of growth. To determine the centres for the spheres which these surfaces represent, and to compare the changes that these centres experience with the growth of the individual, etc., are, according to Benedikt, lines of research which would be very profitable, but which he has not followed. Among the special points which he has made out are that in cases of congenital (or early acquired) blindness, there is a noticeable shortening of the interparietal arch; in congenital aphasia, stenokratophy, in deafness, a shortening of the temporal arch; in epilepsy, a deformation of the parietal bones, and in criminal and psychopathic individuals a flattening of the frontal bone. Finally, he discusses the methods for determining the capacity of macerated skulls, and finds no method which is thoroughly satisfactory.

Ueber die Erregbarkeit einzelner Faserbündel im Rückenmark neugeborener Thiere. W. BECHTEREW, in Kasan. Neurolog. Centralbl. No. 6, 1888.

In attempting to test the function of different bundles of fibres in the spinal cord, the author has hit on the happy idea of using newborn animals. As is well known, only a portion of the bundles of fibres in the cord are medullated at birth. Bechterew assures him-